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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Harold O. Treece

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EXAMINER

NOVOSAD, CHRISTOPHER J

ART UNIT

PAPER NUMBER

3641

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/970,432	Applicant(s) TREECE, HAROLD O.	
	Examiner Christopher J. Novosad	Art Unit 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,8,10-12,14-27,29-37,40,41,44-51,90-108,142-146 and 148 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5,8,10-12,14-27,29-37,40,41,90-108,142-146 and 148 is/are allowed.
- 6) ☒ Claim(s) 44-48 and 51 is/are rejected.
- 7) ☒ Claim(s) 49 and 50 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/19/2008</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Status of Claims in the Application

Claims 1-5, 8, 10-12, 14-27, 29-37, 40, 41, 44-51, 90-108, 142-146 and newly added claim 148 are pending in this application.

Claims 6, 7, 9, 13, 28, 38, 39, 42, 43, 52-89, 109-141 and 147 have been canceled.

Defective Reissue Declaration

The reissue oath/declaration filed with this application is defective (see 37 CFR 1.175 and MPEP § 1414) because of the following: The specific changes/amendments to the claims must also be identified in detail in the declaration, in addition to the errors in the original claims. It is to be noted that the error is not recited in terms of what is wrong with the patent claims. It has to be recited as to what the error is with the patent, not what is being done to correct it.

Claims 1-5, 8, 10-12, 14-27, 29-37, 40, 41, 44-51, 90-108, 142-146 and newly added claim 148 are rejected as being based upon a defective reissue declaration under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175.

The nature of the defect(s) in the reissue declaration is set forth in the discussion above in this Office action.

In accordance with 37 CFR 1.175(b)(1), a supplemental reissue oath/declaration under 37 CFR 1.175(b)(1) must be received before this reissue application can be allowed.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 44-46, 48 and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Brandell et al. (U.S.P. 5,117,910, newly cited by Applicant, and hereinafter referred to as Brandell).

With respect to parent claims 44 and 45, Brandell (Figs. 2A-2B) discloses an apparatus comprising a cementing plug (*the apparatus 2 of Brandell is a cup-type casing packer used in a well cementing method [col. 3, lines 11-15], and therefore, would be considered a "cementing plug" as broadly recited*) having:

a body member (*mandrel 16,16a, Figs. 2A, 2B*) defining a central opening 20 therethrough, the body member (*mandrel 16,16a, Figs. 2A, 2B*) having a plurality of wipers 6,6a that deflect into substantially cylindrical wiping engagement with the inner surface of a casing (*Brandell, Col. 5, lines 57-59, discloses the embodiments of Figs. 1 and 2 as being particularly adapted for use inside a previously placed casing*) when the cementing plug 2 is disposed therein; and

an insert (*ball seat 56, Fig. 2B*) positioned for at least temporary closure (*by seating of a dropped ball onto the ball seat 56*) of the opening 20, wherein the insert (*ball seat 56, Fig. 2B*) comprises:

an outer ring portion (*the cylindrical portion of the ball seat 56 which has a larger inner diameter than the downwardly- and inwardly-tapered smaller inner diameter bore of the lower*

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portion of the ball seat; this outer ring portion is taken to extend vertically from the top to the bottom of the ball seat 56), and

an inner portion (lower portion of the ball seat 56 with the smaller inner diameter bore) integrally-formed with and extending from the outer ring portion (as previously identified), and wherein the inner portion (noted above) is thinner than the outer ring portion (note that the vertical dimension of the inner portion of seat 56, as identified above, is less than the vertical dimension of the outer ring portion of seat 56) and has a variable thickness (the downwardly- and inwardly-tapered portion of the inner portion of ball seat 56 has a variable thickness in its vertical dimension).

Regarding claim 46, the "outer ring portion" and "inner portion", each as identified above in Brandell, "form an internal corner" at their junction, i.e. where the larger inner diameter portion (the outer ring portion) of ball seat 56 begins to taper downwardly and inwardly at the level of the shear pins 58.

As to claim 48, the "inner portion" (*lower portion of the ball seat 56 with the smaller inner diameter bore of Brandell*) has a first thickness (*unnumbered*) at a center thereof (*as measured vertically*), and a second thickness (*unnumbered*) at an outer portion thereof (*as measured vertically*) adjacent to the "outer ring portion" (*as previously identified*), similarly as required in this claim.

Regarding claim 51, Brandell (*Fig. 2B*) shows that the "first thickness," as noted above in reference to claim 48, is less than the "second thickness".

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brandell et al. (U.S.P. 5,117,910), applied above.

Brandell shows the apparatus as noted supra.

This claim distinguishes over Brandell in reciting that the “internal corner” recited in claim 46 “is radiused.”

However, official notice is taken of the well-known engineering design practice of providing radiused internal corners rather than sharp internal corners in solid structures, e.g. metal structures, for the purpose of reinforcing and protecting the metal structure at the corner locations from high bending stresses that might otherwise cause the structure to crack or fracture at sharp internal corner locations.

In view of the above official notice, it would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a "radiused" internal corner formed by the "outer ring portion" and "the inner portion", each as noted above in Brandell, as an obvious engineering design choice for the purpose of reinforcing and protecting the insert (ball seat 56) at the internal corner location from high bending stresses that might otherwise cause the structure to crack or fracture at a sharp internal corner.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

Claims 1-5, 8, 10-12, 14-27, 29-37, 40, 41, 90-108, 142-146 and 148 are allowed.

Dependent claims 49 and 50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher J. Novosad whose telephone number is 571-272-6993. The examiner can normally be reached on Monday-Thursday 5:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached at 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher J. Novosad/
Primary Examiner, Art Unit 3641

January 31, 2009